

IN THE CLAIMS

1-35 (cancelled)

36. (new) Apparatus comprising a light source configured to produce a light output shaped such that at least 85% of power is (i) within a 1515 nm to 1545 nm mean wavelength range and (ii) substantially centered about a mean wavelength within the 1515 nm to 1545 nm mean wavelength range.

37. (new) The apparatus of claim 36 wherein the light source is configured such that at least 99% of power is (i) within the 1515 nm to 1545 nm mean wavelength range and (ii) substantially centered about a mean wavelength in the 1515 nm to 1545 nm mean wavelength range.

38. (new) The apparatus of claim 37 wherein the light source is configured such that at least 99% of power is substantially centered about a mean wavelength of 1532 nm.

39. (new) The apparatus of claim 36 further comprising an interferometric optical gyroscope, wherein the light output of the light source is directed to the interferometric optical gyroscope.

40. (new) The apparatus of claim 39 further including an isolator for isolating the light source from the interferometric optical gyroscope.

41. (new) The apparatus of claim 36 wherein the light source comprises a pump laser and a material which receives light from the pump laser and re-emits the light at a mean wavelength within the 1515 nm to 1545 nm wavelength range.

42. (new) The apparatus of claim 41 wherein the material comprises a length of optical fiber.

43. (new) The apparatus of claim 42 wherein the length of optical fiber comprises a length of Erbium doped optical fiber.

44. (new) The apparatus of claim 43 wherein the pump laser comprises a 980 nm pump laser, and wherein the length of Erbium doped optical fiber has a length in the range of 5-15 meters.

45. (new) Apparatus comprising:
a light source configured to produce a light output with a mean wavelength drift of less than 500 ppm (parts per million) when exposed to weapons level radiation; and,
a band reject filter grating that filters the light output.

46. (new) The apparatus of claim 45 wherein the band reject filter grating removes light output above the 1545 nm mean wavelength level.

47. (new) The apparatus of claim 45 wherein the band reject filter grating centers virtually the entire light output about the 1532 nm mean wavelength.

48. (new) The apparatus of claim 47 wherein the band reject filter grating removes light output outside the 1545 nm mean wavelength level.

49. (new) The apparatus of claim 45 wherein the light source is configured to shape the light output such that at least 85% of power is (i) within a 1515 nm to 1545 nm mean wavelength range and (ii) substantially centered about a mean wavelength within the 1515 nm to 1545 nm mean wavelength range.

50. (new) The apparatus of claim 49 wherein the light source is configured such that at least 99% of power is (i) within the 1515 nm to 1545 nm mean wavelength range and (ii) substantially centered about a mean wavelength in the 1515 nm to 1545 nm mean wavelength range.

51. (new) The apparatus of claim 50 wherein the light source is configured such that at least 99% of power is substantially centered about a mean wavelength of 1532 nm.

52. (new) The apparatus of claim 45 further comprising an interferometric optical gyroscope, wherein the output of the light source is directed to the interferometric optical gyroscope.

53. (new) The apparatus of claim 52 further including an isolator for isolating the light source from the interferometric optical gyroscope.

54. (new) The apparatus of claim 45 wherein the light source comprises a pump laser and a material which receives light from the pump laser and re-emits the light at a mean wavelength within the 1515 nm to 1545 nm wavelength range.

55. (new) The apparatus of claim 54 wherein the material comprises a length of optical fiber.

56. (new) The apparatus of claim 55 wherein the length of optical fiber comprises a length of Erbium doped optical fiber.

57. (new) The apparatus of claim 56 wherein the pump laser comprises a 980 nm pump laser, and wherein the length of Erbium doped optical fiber has a length in the range of 5-15 meters.

58. (new) Apparatus comprising:
a fiber optic light source that provides a light output, wherein the fiber optic light source includes a pump laser and a length of doped optical fiber, wherein the length of doped optical fiber is configured to receive light from the light pump and to re-emit the light with a predetermined spectrum and mean wavelength between 1515nm and 1545 nm so that the light output of the fiber optic light source is substantially unaffected when the fiber optic light source is exposed to weapons level radiation;

a filter that filters the light output to remove light having a mean wavelength greater than 1545 nm; and,

an interferometric optical gyroscope coupled to receive the filtered light output.

59. (new) The apparatus of claim 58 wherein the filter comprises a band reject filter grating.

60. (new) The apparatus of claim 58 wherein the light source is configured to shape the light output such that at least 85% of power is (i) within a 1515 nm to 1545 nm mean wavelength range and (ii) substantially

centered about a mean wavelength within the 1515 nm to 1545 nm mean wavelength range.

61. (new) The apparatus of claim 60 wherein the light source is configured such that at least 99% of power is (i) within the 1515 nm to 1545 nm mean wavelength range and (ii) substantially centered about a mean wavelength in the 1515 nm to 1545 nm mean wavelength range.

62. (new) The apparatus of claim 61 wherein the light source is configured such that at least 99% of power is substantially centered about a mean wavelength of 1532 nm.

63. (new) The apparatus of claim 58 further including an isolator for isolating the light source from the interferometric optical gyroscope.

64. (new) The apparatus of claim 58 wherein the doped optical fiber comprises a length of optical fiber.

65. (new) The apparatus of claim 64 wherein the length of optical fiber comprises a length of Erbium doped optical fiber.

66. (new) The apparatus of claim 62 wherein the length of optical fiber has a length in the range of 5-15 meters.

67. (new) The apparatus of claim 66 wherein the length of optical fiber comprises a length of Erbium doped optical fiber.

68. (new) The apparatus of claim 58 wherein the mean wavelength is 1532 nm.